Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Landtech Enterprises, LLC
Well Name/Number: ROMO #2 SWD
Location: NW SW Section 26 T28N R58E
County: Roosevelt **, MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 10 to 15 days drilling time.
Unusually deep drilling (high horsepower rig): Double derrick rig 900 HP, 5,620' TD Dakota Formation disposal well.
Possible H2S gas production: None anticipated.
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): No facility is not a producing oil and gas production facility. Purpose of facility is to dispose of saltwater.

Mitigation:
__ Air quality permit (AQB review)
___ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____
Comments:_____
_____
_____

Water Quality

(possible concerns)
Salt/oil based mud: Yes to saltwater drilling fluids below surface casing shoe to total depth. Surface casing hole freshwater, and freshwater mud system to be used.
High water table: Possible high water table at this location.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Shotgun Creek, about ½ of a mile to the southwest from this location. Between this location and Shotgun Creek is a low lying wet flat.
Water well contamination: None, water wells in the area are 150' or shallower. Closest water well is about 3/8 of a mile to the northwest, northeast, southeast and south, 5/8 of a mile to the west and southwest and ¾ of a mile to the northwest and southwest of this location. Depth of these water wells range from 14' to 1380' Significantly shallower than the surface casing setting depth of 1550'. Surface casing hole will be drilled with freshwater and freshwater drilling fluids to 1550'. Steel surface casing will run and cemented from 1550' to surface to protect groundwaters.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No, Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
X Closed mud system
X Off-site disposal of solids/liquids (in approved facility)
__ Other: _____
Comments: 1550' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems in and around freshwater drainage. Mud system will be a closed loop mud system. Cuttings to be disposed of a Dishon's certified Class II solids diposal site. Salt based drilling fluids will be disposed of at a commercial

Class II disposal site.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: No, location will require a moderate cut of up to 11.3' and moderate fill, up to 11.6', required.
Loss of soil productivity: No productivity loss where the disposal facility is built, surface use is grassland.
Unusually large wellsite: No, large well site 400'X400'
Damage to improvements: Slight, surface use is grassland.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Will use existing roads, Highway #2 and existing county road, Snake Butte Road. About 305' of new access road will be built into this location off Snake Butte Road. Mud system will be a closed loop mud system. Cuttings to be disposed of a Dishon's certified Class II solids diposal site. Salt based drilling fluids will be disposed of at a commercial Class II disposal site. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Residences about 3/8 of a mile to the southeast, ¾ of a mile to the northwest and ¾ of a mile to the southwest from this location. Town of Bainville, Montana is about 1 mile to the southwest from this location.
Possibility of H2S: None
Size of rig/length of drilling time: Double drilling rig 10 to 15 days drilling time.

Mitigation:
_X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Sufficient distance between location and buildings noise should not be a problem.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Threatened or endangered species identified as the Pallid Sturgeon, Piping Plover, Interior Least Tern and Whooping Crane. Candidate species is the Sprague's Pipit. NH Tracker website lists five (5) species of concern. They are as follows: Le Conte's Sparrow, Nelson's Sparrow, Sedge Wren, Bobolink and Whooping Crane.

Mitigation:
__ Avoidance (topographic tolerance/exception)

__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____

Comments: Private grass surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

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Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified.

Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other:_____

Comments: Surface location is private grassland. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: No concerns.

Remarks or Special Concerns for this site

This is a commercial saltwater disposal well in the Dakota Formation. No concerns.

Summary: Evaluation of Impacts and Cumulative effects

Short term impacts expected, no long term impacts anticipated.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: November 15, 2011

Other Persons Contacted:

_Montana Bureau of Mines and Geology, Groundwater Information Center GWIC website_____
(Name and Agency)
Roosevelt County water wells
_____
(subject discussed)
November 15, 2011_____
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County
(subject discussed)

November 15, 2011_____
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T28N R58E
(subject discussed)

_November 15, 2011_____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____